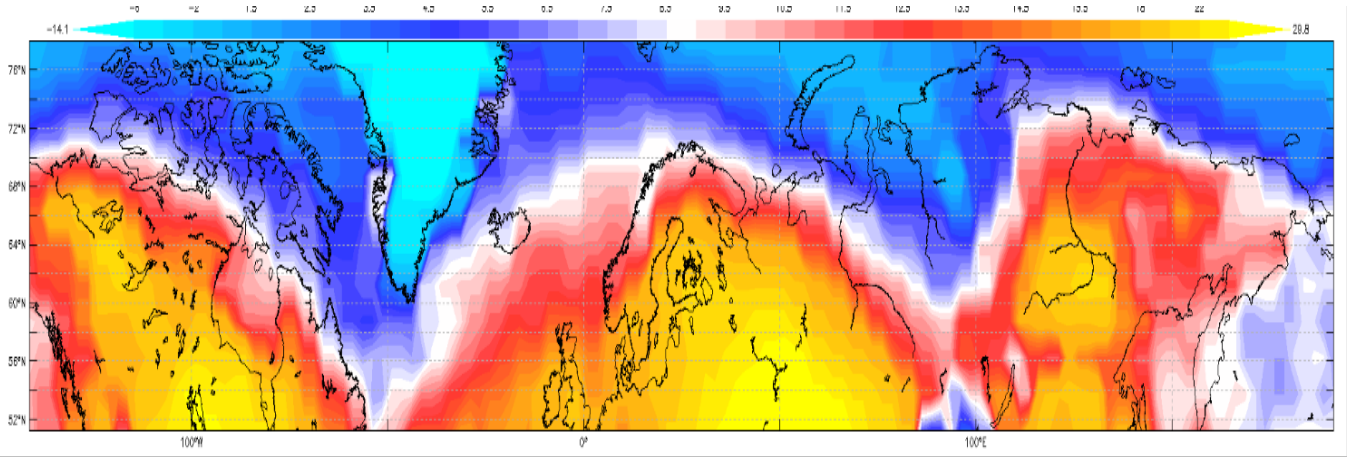
NAME:_____ DATE:_____ CLASS:_____

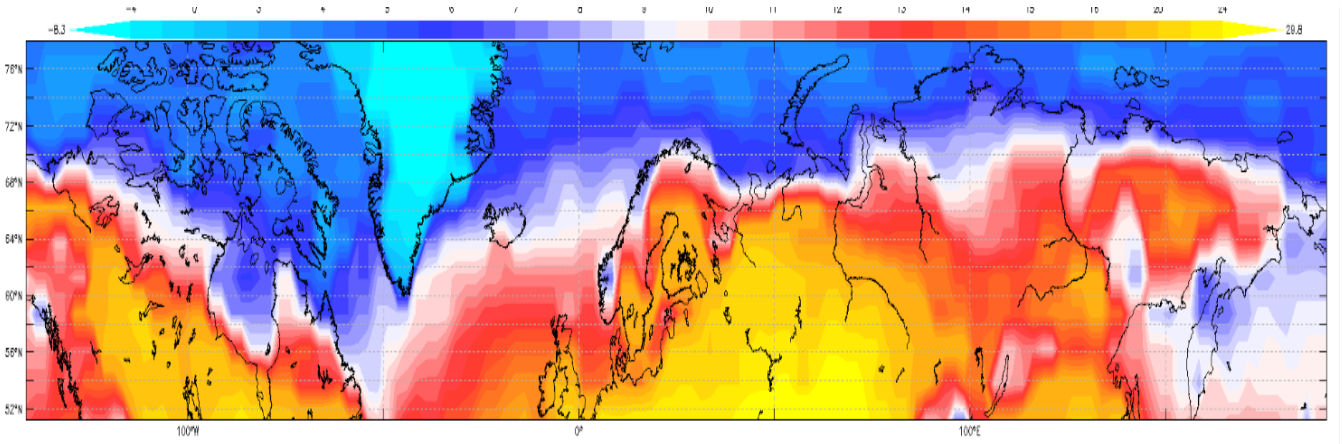
MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration
http://mynasadata.larc.nasa.gov/?page_id=474?&passid=90

Use the following 3 plots to answer questions 1 – 4 below. These plots are for Walnut Grove, Minnesota, site of one of the Little House on the Prairie books.

Maps Part 1 – Monthly Near Surface Air Temperature Color Plot for June 1995
Temp range on key -4 C (light blue) to 24C (yellow)



Maps Part 1 – Monthly Near Surface Air Temperature Color Plot for June 2005
Temp range on key -4 C (light blue) to 24C (yellow)



NAME:_____ DATE:_____ CLASS:_____

MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration
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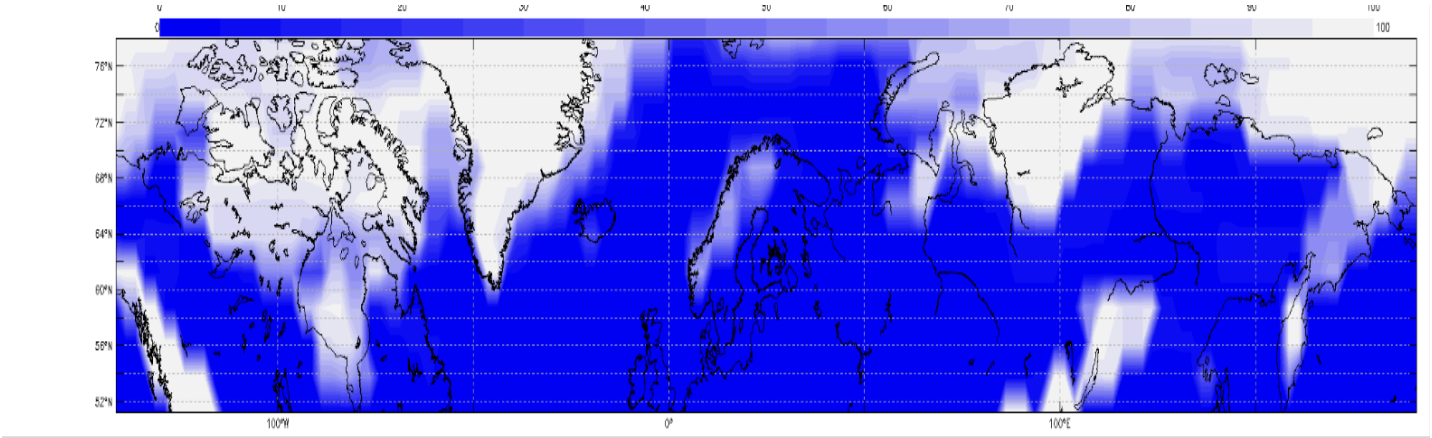
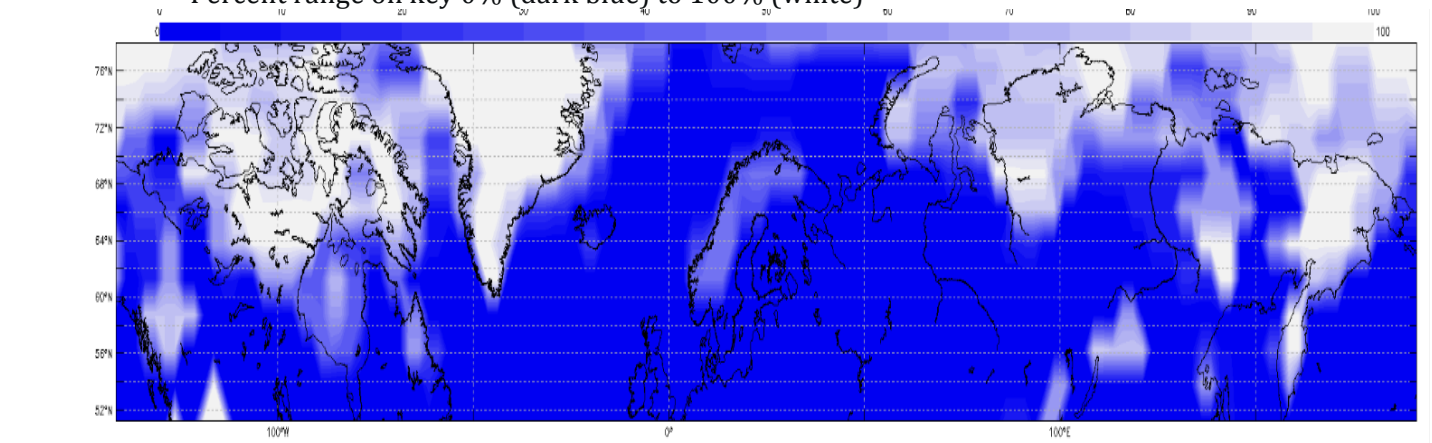
Maps Part 1 – Monthly Snow-Ice Percent Coverage for June 1995
Percent range on key 0% (dark blue) to 100% (white)



Maps Part 1 – Monthly Near Surface Air Temperature Color Plot for June 2005
Percent range on key 0% (dark blue) to 100% (white)

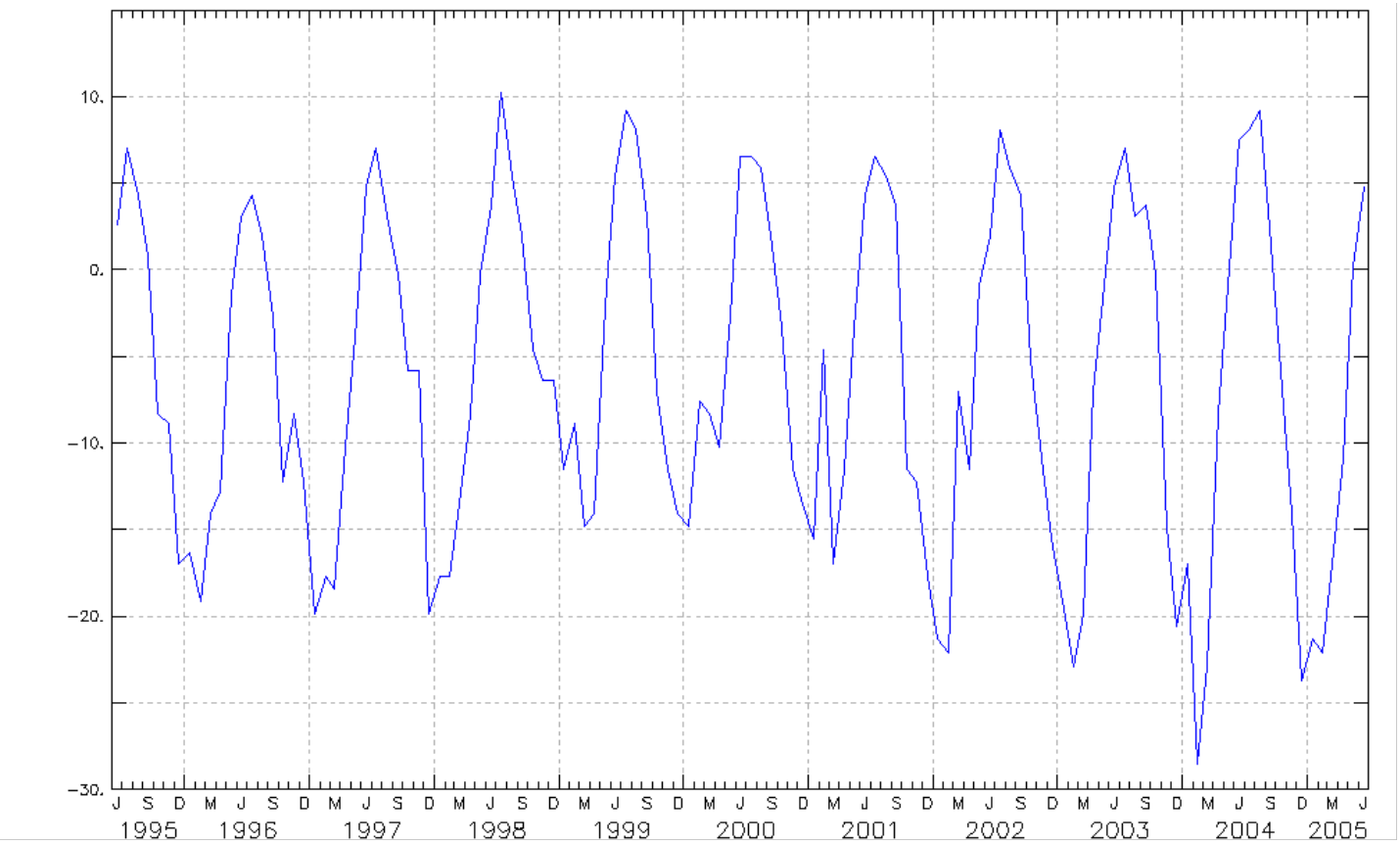


NAME:_____ DATE:_____ CLASS:_____

MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration

http://mynasadata.larc.nasa.gov/?page_id=474?&passid=90

Line Plots Part 1 – Monthly Near Surface Air Temperature Time Series (June 1995 – June 2005) in degree C

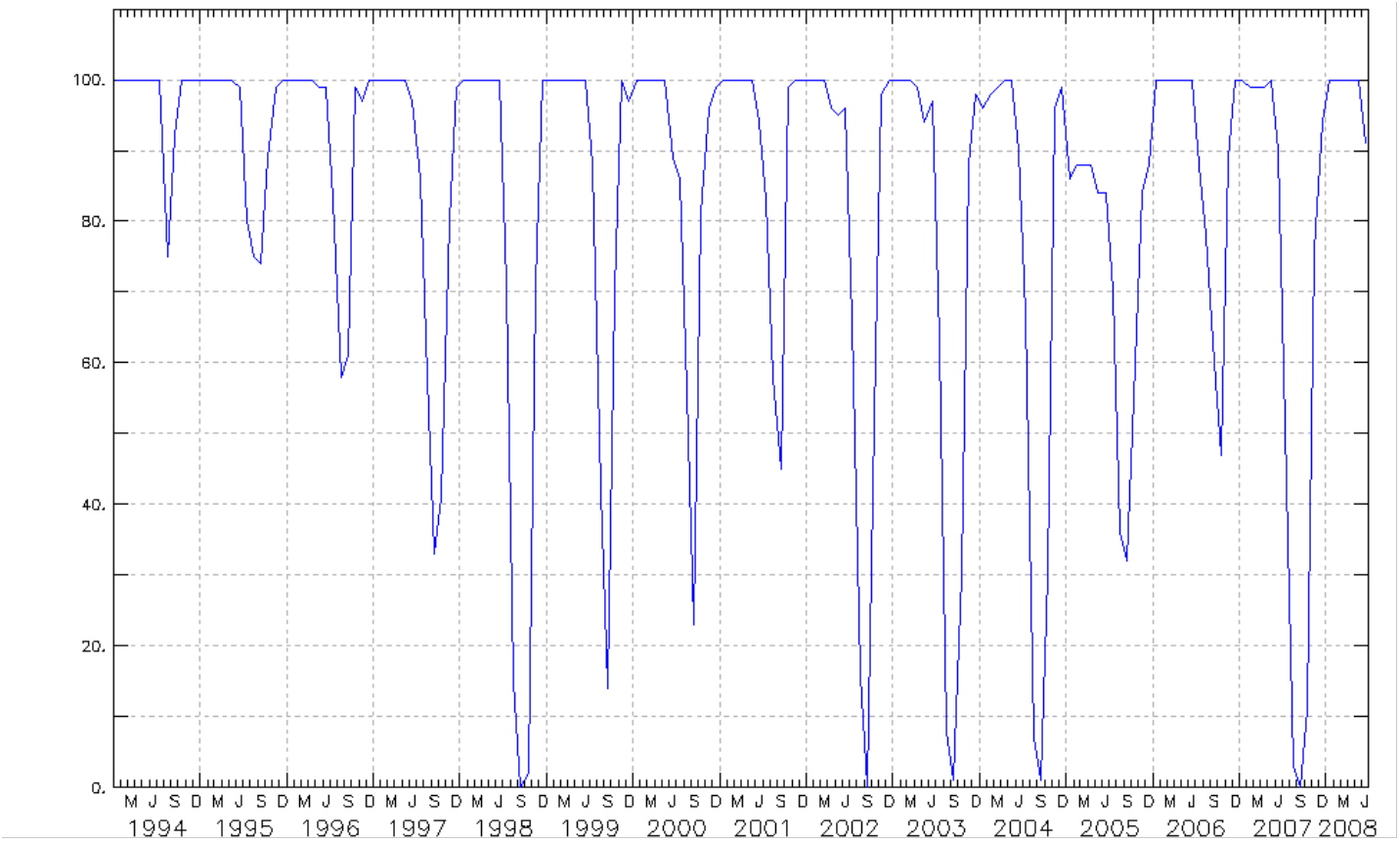


NAME:_____ DATE:_____ CLASS:_____

MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration

http://mynasadata.larc.nasa.gov/?page_id=474?&passid=90

Line Plots Part 2 - Monthly Snow-Ice Percent Coverage Time Series (June 1995-June 2005) in percent



NAME:_____ DATE:_____ CLASS:_____

MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration

http://mynasadata.larc.nasa.gov/?page_id=474?&passid=90

Questions:

1. Which year is warmer in the South Beaufort Sea region, 1995 or 2005? How many degrees warmer?

2. Which year has more snow-ice amount in the same region? By how much?

3. Using the line plots, examine the seasonal oscillations of the variables. Do you see any trends in the line plots?

4. Write a paragraph describing your findings and conclusions using the data results.

5. Would you expect to see any impact on the habitat and migration of polar bears based on your conclusions?

6. How will the changes that you study affect the people of Northern Alaska and Western Canada? What other information or data would help you answer this question?

7. Do you think there is a global change trend or just a local random variation? Explain your answer. What other information or data would help you answer this question?

Extensions:

NAME:_____ DATE:_____ CLASS:_____

MY NASA DATA: March of the Polar bears: Global Change, Sea Ice, and Wild Life Migration

http://mynasadata.larc.nasa.gov/?page_id=474?&passid=90

1. Choose another animal species and consider the effects of climate change on their natural habitat and migration patterns.

2. Plan a migratory trip from the viewpoint of a polar bear. For example: Where (location) does your polar bear character begin and end the journey? Describe what your polar bear character experiences along the journey. For additional information, use the Polar Bear International website and Global Warming and Polar Bears links in the Lesson Links section.